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Integrated Curriculum: Art as Catalyst

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Thesis

Submitted in partial fulfillment of the requirements
for the degree of Master of Arts in Art Education
in the Graduate College of the
University of Illinois at Urbana-Champaign, 2013

Urbana, Illinois

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ABSTRACT

An arts based integrated curriculum plan is what resulted from a look at integrated curriculum and the advantages it has for student learning and success. We take a look at integration and how it is defined, practicing schools, and finally a three unit curriculum plan with full lesson plans included in the appendix.

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CHAPTER 1

INTRODUCTION

As a teaching professional in the visual arts I always want to engage my students through projects that will help them develop their critical thinking and problem solving skills. An integrated inspired approach (I will be focusing on an arts-based integration) not only creates an environment for developing these skills, but it also aims to blur the boundaries between the academic subjects. What has emerged from my research of integrated curriculum is a curriculum plan of project-based and art-based lessons that can be used in the classroom today. Art is a wonderful vehicle for this approach as so many disciplines can be utilized through the medium.

Before taking a look at a curriculum plan of an arts integrated nature, however, one question needs to be answered in order to provide a foundational structure to work within: What does it mean to be integrated?

CHAPTER 2

INTEGRATION EXPLAINED

INTEGRATION EXPLAINED

Knowing how the term integrated is defined, interpreted and used in the world of education is an important detail that needs to be established before further exploration of this topic takes place. There are terms that are often connected with and often confused with integrated curriculum that need to be defined as well. James Bean (1999-2011) defines four curriculum models: separate subject curriculum, multidisciplinary, interdisciplinary, and integrated. The first type discussed by Beane, separate subject curriculum, is the academic model that most people are familiar with. Most schools operate under this model and all use the same or similar academic subject separations. Within this system each teacher teaches his or her own subject and that subject is contained within the singular classroom. Subject lines in this model are carefully preserved. This structure is reinforced by the presence of subject specific standardized tests.

Next, Beane (1999-2011) focuses on the multidisciplinary, interdisciplinary and integrated models. In my experience, these three models are often confused and thus used interchangeably. Many people seem to be under the impression that anything which crosses discipline/subject lines or uses more than one subject is considered integrated. Multidisciplinary (or multisubject as some may call it) curriculum utilizes at least two different subjects in the teaching of a common theme, concept, topic or issue. While the disciplines within this curriculum model are still separate at the end of the day, connections are being made between the content areas. This ability to recognize

connections between disciplines by revisiting the same theme in multiple classes has the potential to result in a richer and more complete understanding of the chosen topic. Personally, I learned much more about world politics when looking at it through an art history lens myself.

Progressing through the levels of integration, interdisciplinary curriculum models incorporate or combine the use of two or more discipline areas at the same time in order to function in tandem with one another as a problem or theme is explored. Unlike the multidisciplinary approach, interdisciplinary curriculum does not use the subjects as stand-alone entities, but rather as two parts of a whole. Without one, the other would not be as effective. This line of inquiry is also called cross-curricular curriculum and although it does combine multiple disciplines it does not pull from all of them.

True integrated curriculum revolves around a big idea and aims to blur the distinct boundary lines between academic subjects in the classroom. Like the multidisciplinary approach, integrated curriculum progresses from project to project rather than subject to subject. This encourages learning through problem solving and critical thinking. As students tackle real life situations and themes they draw on a broad bank of knowledge and skills in order to solve the problem at hand. Teachers and students may collaborate to create an effective theme-based curriculum that will help them to grow as learners and take advantage of the many different personalities and capabilities present in the classroom. The more relevant lessons are to students, the more they will learn and retain. This integrated curriculum model is often thought to transcend the subject lines that we are used to and is thus also known as a transdisciplinary model (Beane 1999-2011; Calgary Arts Academy, 2006).

This transdisciplinary/integrated approach is seen, implemented and interpreted differently by different people. This creates an additional layer of meaning behind the word integration. Some educators (like those of the Reggio Schools in Italy) may employ a fully integrated approach by blurring all subject lines by pulling from every discipline so much so that a line between subjects cannot be detected as students are taken through the problem solving process. Others may use the arts as a platform and employ an arts-based integrated curriculum, which starts with the art as a platform and vehicle through which to explore resolution. As an art teacher, my focus is on the latter as this is the platform I have tried to adopt in my own classroom. For example, an ideal teaching situation would be an art project that has students do research, explore the world around them and solve problems. As an artist I know that many other subjects are utilized all the time. Later, I include descriptions of projects that might fit into an arts-based model as well as the corresponding, usable lesson plans.

Advantages of Integration

One of the main problems seen in education that cross-disciplinary and transdisciplinary models seek to remedy is that of fragmentation. Fragmentation is the compartmentalization or separation of knowledge as subjects are typically taught in schools where students move from classroom to classroom and teacher to teacher. Those in favor of cross-disciplinary models seek to reduce fragmentation for they feel that knowledge is being boxed up and placed into a hierarchy of importance, with art often taking a back seat alongside the other "specials' like music and drama (Krug and Cohen-Evron, 2000, p. 260). Sometimes teachers do collaborate with one another, though sadly, generally only collaborating between the core subjects, leaving out the arts. In the

elementary school realm this is often because specials are the classes during which the classroom teacher can have a break. This being the case, planning time becomes difficult to come by (Burnaford, 1993, p. 44). As the discussion between the rest of the staff is lacking, teachers of the arts are often left to design their own separate curriculum, creating a gap between what they teach and what students are learning in their other classes. This divide further cements in young minds the separation between areas of knowledge in a students' education.

A study done by art educator Cyntia Ann Bickley-Green (1995) gives evidence of this separation. In her study, Bickley-Green asked several pre-service (student) teachers with whom she was working to examine the art lessons they were creating, and to identify what math or science elements might be present or built in, as it were. She found that these teachers were stuck with their preconceived notion of subject fragmentation and she further discovered that the students believed there to be no common ground between art, science, and math. Comments made by Bickley-Green's students included excamaitions like, "I am an artist, I don't do math." "Art and science are different." (Possibly thinking of their thoughts that science is more concrete while art is more fluid and expressive.) and, "I failed all my math courses." Apparently these student teachers were convinced that since they chose art, they were safely exempt from the seemingly more rigorous learning in the traditionally known academic subjects they so desperately wished to avoid. After some encouragement, however, the pre-service teachers in the study identified several elements from both science and math that could be found in the lessons they were drafting. Concepts they were working with such as the melting and fusing point of glass (glaze) in ceramics and the presence of geometry through the

elements and principles of design were already a part of their planning. All they had to do was recognize and acknowledge what was already there. Through this exploration these student teachers were shown that subjects do not fit neatly into fragmented bits of unrelated information.

Reinforcement of subject fragmentation is, in part, a result of the increased importance placed on scientific knowledge, or technology, and the academics (Krug and Cohen-Evron, 2000, p. 261). Standardized testing, with its focus, as of late, on language arts, math and science reinforces this subject fragmentation in K-12 schools. When teachers are forced to concentrate their energy on "teaching to the test" it is no wonder fragmentation and separation has become such a widespread problem. When we place imaginary bookends around the information taught in a single-subject-centered classroom it makes the content seem select and specific which "offers little more than a disconnected and incoherent assortment of facts and skills" (Beane, 1995, p. 618). Other factors that perpetuate this strong division include textbooks and the adult teachers who went through a fragmented curriculum themselves as students (p. 619). Textbook companies quite literally write the book on every subject taught in schools which then dictates how teachers teach information (with emphasis in the core and tested subjects). The writers of textbooks are people who were educated in the system of knowledge fragmentation, creating a viscous cycle.

As with any method of education there are those who express concern and doubt about the effectiveness and legitimacy of a cross-disciplinary or integrated model. Those who question this approach believe that the implementation of this model will destroy the integrity of the individual disciplines of knowledge, that it will somehow lessen them

(Beane, 1995, p. 620). They fear that the intrusion of another discipline into their specialty will ultimately result in a full-scale invasion of the secondary subject, which in turn, will leave the once clear mission of the original subject muddled and confused. There is also a concern that has been voiced that if cross-curricular ideas enter the academic classroom, students will have a harder time in successfully completing and passing standardized tests. Information compartmentalization is a strong aspect that has been perpetuated by the national curriculum and state standards which places the focus of student learning on the core subjects and the resulting tests by which teachers are evaluated. These subjects are English, Science and Math. These subjects are not only the gauge by which the teachers of math, science and English are evaluated but the rest of the faculty as well.

Some proponents of art education add their concerns about integration with the thought that if art begins to become tangled up in another curriculum subject then art will become a supplement and be utilized as a mere gimmick, prop or crutch in the classroom. While the concerns and doubts of art educators may be valid, in my view they should also remember that the art curriculum is not out of their hands. I would argue that a cross-disciplinary or integrated approach maintains the integrity of each subject or discipline while it enhances them as the subjects complement and support each other. Using other subjects to support art and art to support other subjects allows students to gain a broader and more holistic educational experience. If more teachers took advantage of an integrated or cross-disciplinary approach perhaps less information would slip through the cracks and the gas that are present in fragmented curriculum to which many teachers cling (Beane, 1995, p. 620). In my opinion, students would also

retain a greater percentage of the information received because of its cross-connective reinforcement.

Personal Experiences

As a teacher, I feel the necessity to make my curriculum relevant to my students as they progress in their scholastic careers. Having gone through the public educational system myself, I experienced the distant and the sometimes seemingly meaningless 'learning' that often takes place in schools. More often than not I found myself learning how to play the education game rather than developing a valuable knowledge base for my future life. When a rare connection was found between two classes I was taking, I would find myself wishing those moments were more frequent. It seems that today, as was the case when I was in school a short time ago, students are expected to focus their attention and energy into one subject at a time, memorizing specific facts and concepts that will ultimately be systematically recalled as they bubble in a Scantron sheet at the end of a term. While implementing a more integrated curriculum in my own art classroom will not eradicate the testing rituals performed by students, my aim is that it will allow them to find a new way to apply the information they learn, putting some cross references into the filing system of information they have catalogued in their minds.

Art is thought of by many as drawing, painting, pottery, coloring, crafts and other such descriptions. This shallow idea only scratches the surface of what art is. It fails to allude to the richness of understanding and knowledge that is involved in the completion of a work of art and the thought it provokes. While working with fourth graders during my student teaching practicum in the spring of 2010, I found this all too true. The students were taken aback when I informed them that they would be utilizing their math

skills in the creation of their own hand-bound journal or sketchbook. In their minds, art was art, math was math, and one had nothing to do with the other. It seems that students, even at a young age, have been so disciplined in their compartmentalization of information that they have begun to believe all knowledge fits into tightly sealed boxes and should be kept neatly filed away in its prescribed location. While I believe a well-defined structure is a good way to organize information, it also needs to become more fluid and accessible so it can be utilized and applied in many areas. Like photographs that can be categorized many different ways in an electronic photo database like iPhoto, information can claim many different labels as well. Incorporating knowledge from across the disciplines in the art classroom is one way to start this fluid exchange. Implementing and integrating different knowledge bases also includes a melding and incorporating of different teaching methods and teacher input to create a curriculum that allows for maximum student benefit.

"There is nothing quite like the excitement of understanding one subject by encountering it through another (Barnes, 1993, p. 63)". This quote expresses part of the magic that can occur as a result of a cross-disciplinary approach to education. As exploration of this approach is undergone there are several different aspects that need to be considered. These considerations include the issue of curriculum fragmentation, collaboration among teachers, the student, and opposing skepticism. Exploring these facets of a cross-disciplinary curriculum approach allows for a richer understanding, aiding one in their own development. And as the name "integrated curriculum" suggests, it incorporates knowledge from across the subject disciplines or school subjects and integrates sources of teaching knowledge as well.

CHAPTER 3

A LOOK AT PRACTICING SCHOOLS IN NORTH AMERICA

The following is a look at currently functioning integrated curriculum models at various stages of development and success. I will be exploring how these individual models are operating and to what degree the schools participating in this curriculum model have found success. Recorded standardized test scores will be referenced as a way to measure success in the current guidelines under which the vast majority of school systems operate.[1]

Exploring the implementation of integrated curriculum in schools is not only vast but varied as well. Globally schools are implementing this model in unique and individual ways, but in order to give some focus to my inquiry I chose to take as my sampling pool, schools within the North the United States and Canada. Though this is still a very large population to choose samples from it allows for a diverse look at integrated curriculum. Calgary Arts Academy, Quest Montessori, Art is Education, Montgomery County Public Schools, and Woodrow Wilson School make up the sample group. Each of these sample groups will be examined as individual entities and later compared/contrasted assessing their effectiveness and success.

CALGARY ARTS ACADEMY:

[1] The explorations expressed throughout this section primarily stem from my own examination and observation of descriptive material contained on each individual organization's website, and in the case of the Calgary Arts Academy, information received during a session at the 2011 NAEA national conference in Seattle, Washington.

The Calgary Arts Academy in Calgary, Alberta, Canada (Calgary Arts Academy, 2006) operates under the arts integrated, or arts immersion idea that infuses the arts into every aspect of student learning in their schools. The academy retains two campuses, one for elementary and the other for middle grades. Regardless of grade level, the curriculum is developed around a central chosen art form (visual art, music, dance, drama, or literary art) and theme or problem to solve. Teachers start with the theme and art form and examine which curriculum objectives put forth by the national curriculum will fit into the foundational factors. Even with this attention to national curriculum standards, Academy teachers assert that they do not "teach to the test". This assertion also comes with the distribution of a unique report card that is rife with teacher comments along with comments from collaborating artists who have seen the progression of the students throughout the term. Students are given grades for the academic subjects that are explored through the arts based projects and no grade reflects the judging of the art itself. The art is used purely as a vehicle for learning and as such is not graded as a final art product. While the grading within the school is unique, students are still expected to participate in the standard curriculum tests. Having been in operation since 2003, the Academy has, as of the testing year of 2009-2010 (Calgary Arts Academy, 2006), been able to successfully meet the national standard requirements in every area.

The core essence of the belief and mission of the Academy is presented in truncated form on their website and is duplicated in part below (Calgary Arts Academy, 2006) (Quest Montessori School, 2011):

Students will learn the Alberta Curriculum through Arts Immersion

Unique partnerships with Arts Organizations

We will document educational research and publish arts immersion curriculum plans

The Academy will provide a democratic environment

The Academy will use the "Circle of Courage" as a life choice

The Academy will focus on the "Developmental Assets" of each student.

These statements and mission points as expressed by the Calgary Arts Academy gives anyone perusing their site a snapshot view of the type of unique education they offer.

QUEST MONTESSORI

Montessori schools, of which there are over six thousand in the United States and Canada (Quest Montessori School, 2011), are based on the teachings and philosophy of Maria Montessori who was an Italian trained physician turned anthropology professor. She ended up leaving academia and medicine to pursue the passion she had for the discovery and study of the learning processes of children. Private, non-profit Montessori schools are born through the efforts of parent interest, like that of parents involved in the birth of Quest Montessori in Rhode Island in 2002. These parents were hoping to afford their children the experience of a holistic and integrated curriculum that would foster successful learning.

Multi-age classrooms cluster two or three grades at a time from preschool through middle school allowing for more cooperative learning among students as well as an environment conducive to more individually paced and individualized curriculum for students. Students learn through scaffolding, which is support given to the student throughout the learning process by teachers and through aids and resources, and are

aided by the implementation of an integrated curriculum that stems from over arching cultural themes through which teacher and student work together to set individualized goals for the student to accomplish. Quest is very much grounded in a self-directed hands-on learning approach and learning through personal inquiry (Quest Montessori School, 2011). Students who attend a Montessori school will receive an education completely aligned with the state and national standards but through the integrated approach in which Montessori is a firm believer.

Art is Education

In 2006 The Cleveland, Ohio Metropolitan School District began trying a new Arts Integration program that partners with local organizations to bring arts education to the schools within the urban school district (Art Is Education Cleveland, 2007-2011). This collaboration is interested in bringing arts into the schools and embedding arts activities into non-arts curriculum to aid in the learning process of students. They do not wish to act as a substitute for quality arts instruction as its own discipline, but rather to serve as an aid in fostering cross-curricular learning. Partners within this collaborative relationship include Museums, Dance companies, Theater houses, Libraries, and other artistic venues. Before, during and after a lesson is taught through the collaboration with a partner, an assessment is taken as to the effectiveness and success of the lesson. These forms are unique to the situation and are not measurable (standardized) against any other district in any way. Perhaps one of the reasons this program has been selected for this particular school district is the record of low end of grade test scores recorded for many years. Selected by the Ford Foundation to participate in an effort to improve the

public educational system in urban areas the Art is Education collaborative seeks to arrive at the school system providing every student with a high quality education that includes arts immersion and arts infused curriculum. These already low performing schools have not yet achieved standard meeting status in testing scores, although those schools who have been participating in the Art is Education collaboration have overall higher testing scores than those schools within the same district who are not participants in this collaboration.

Montgomery County Public Schools

Rockville, Maryland's Montgomery County Public School District has been embarked on a new adventure in 2010: the piloting/testing of a new integrated curriculum model (Montgomery County Public Schools, 2011) (Beane, 1999-2011). The new Elementary Integrated Curriculum was still in development even as it was being implemented voluntarily across the county in willing kindergarten and first grade classrooms. The idea behind this change is to upgrade the already successful curriculum that was currently in place by taking advantage of natural connections found between different content areas. Educators working on the development of this curriculum are hoping to have a fully developed curriculum model complete and ready to implement by the year 2013 and include all elementary grades K-5. This new and improved curriculum hopes to foster greater critical thinking skills and overall academic success through connections between subject and content areas. A federal grant through the U.S. Department of Education and a partnership with Pearson publishing group has aided Montgomery County in the realization of this new system. Online teacher resources,

planning tools and curriculum evaluation materials have been made available to the participating educators. Data is being perpetually collected though there has been no report as this program is still in its first year of implementation.

Woodrow Wilson

In 2008 K-8 Woodrow Wilson School, Weehawken, New Jersey was reported to have overcome challenges in order to achieve high overall proficiency rates of 92 % (Treanor, 2010), 18 % over the state average through the implementation of an arts integrated curriculum. The obstacles to which Ronald Treanor refers to in his article about this achievement are namely that of poverty with over 80 % of students eligible for free and reduced lunch and highly dense population levels. Through the implementation of the Multiple Intelligence Arts Domain students are allowed the privilege of engaging in special classes two afternoons per week that integrate arts and core curricular subjects which permits students to cultivate their interest and potential in these areas simultaneously (Treanor, 2010) (Woodrow Wilson School, 2004-2011). Partnerships with organizations such as the New York City Ballet and Metropolitan Opera give students unique opportunities working with individuals associated with these groups and performing in their spaces as well. As reported by Treanor and advocated by the school, this arts integration has greatly enhanced the performance and learning of the students who attend Woodrow Wilson. As this quote from the school's accolade web page states:

> *It is the school's vision to identify and nurture the unique talents and multiple intelligences of our students through the implementation of an integrated academic, fine and performing arts curriculum. Woodrow Wilson has been recognized as one of the nation's cutting edge schools in the area of Arts Integration*. (Woodrow Wilson School, 2004-2011)

Since Treanor's article in 2008 the school still continues to perform well on state tests with 30 % of Woodrow Wilson students performing above the state averages (Treanor, 2010).

FINDINGS AND OVERARCHING OBSERVATIONS:

Overall, through looking at the data and responses to the integrated curriculum models explored here there is a definite positive correlation between arts integration and student performance on standardized tests and learning ability; all five institutions have some degree of positive feedback with regards to the implementation of this kind of curriculum model. While each of these examples is at various stages of development and measurable success, there is no doubt of the positive correlation, if not influence an integrated curriculum has on student performance, whether it be utilizing full integration or arts integration. A simple table shows the data in a snapshot view[2]:

Organization	Years in Operation	Integration Type	Standardized Testing History
Calgary Arts Academy	8	Arts	Successful
Quest Montessori	9	Full	No Data Available Standard-meeting Curriculum
Art Is Education	4	Arts	Positive Correlation Non-standard meeting scores
Montgomery County	> 1	Full	No Data Yet
Woodrow Wilson	7	Arts	Successful Above Average

Through this table it can be observed that in general, the longer an integrated curriculum model is in place, the more successful it becomes. It is harder to gauge,

[2] Table compiled from referenced information.

however whether full integration or arts integration is a more successful model with the data available. Both fully integrated curriculum models have obstacles in evaluating their success: the first due to lack of information readily available and the other due to the newness of the program. It would be unfair to declare that arts integration is overall a more successful model with this lack of information although in this study the arts integrated models seem to be reflecting more success. This look at the selected integration models is enlightening, but certainly not the end of ongoing research: it is a leap in the right direction of inquiry and exploration.

Chapter 4

Practical Application: Curriculum Plan

After taking a look at what others have accomplished with various integrated models I wondered what an integrated curriculum might look like through the platform of an art classroom and as an art teacher I wished to try and discover how one might go about creating their own integrated curriculum in their own classroom. I began the entire process by making some key decisions: which state Standard Course of Study to follow, which grade level on which to focus my lessons, an overarching theme or big idea and a time table in which to work. Ultimately I decided to work within the North Carolina Standard Course of Study focusing on the eighth grade curriculum for the period of nine weeks with three units to cover that have overarching themes focusing on one's place in society as an individual both in a local community as well as globally.

Process and Decision Making

Having a current teaching license with the state of North Carolina led me to choose to work with North Carolina Standards and units of study. After browsing through the units of study and major concepts laid out in the middle school curriculum, I chose to focus on the eighth grade as the social studies concentration for the year is unique to this curriculum alone: the state itself. This, coupled with intriguing curriculum in all subject areas helped me make my decision. North Carolina middle school students typically cycle through the art classroom in nine week intervals and knowing this fact gave me a time line in which to plan a curriculum. With these basic decisions made I was able to start planning my curriculum.

I started first by brainstorming ways I could integrate and include the other discipline areas into my curriculum. I realized very quickly that it would be quite impossible to attempt to include everything into a short nine weeks. Unrealistic and overambitious was not my goal, rather a realistic and highly plausible plan that could be implemented and fit in with any middle school's existing curriculum plan. With this in mind I pinpointed areas of the curriculum that would be able to be incorporated at any point in the year and roughly follow the unit sequencing students would experience in their classes. I wished to develop lessons that could easily have been taught in another classroom, eliminating the feel that the lesson belonged strictly in one discipline. As I began brainstorming I found myself, as an art teacher, thinking of the process and materials in order to give students a well-rounded *arts-based* education rather than a fully inclusive integrated experience. I began to examine the curriculum and sequencing of unit plans as access points in the other disciplines alongside those of the art curriculum and found that by marrying all concepts together, more advanced concepts and more successful ideas were beginning to surface. What follows is an articulation of what has developed through my explorations for this thesis as a three unit curriculum plan.

Curriculum Plan

Students learn better and are more interested and invested in projects in which they have decision-making and directional 'powers'. Keeping this in mind, I designed my curriculum around a student-centered focus, allowing them to take charge and be involved in their own creative learning. Collaboration with other classroom teachers will enrich the learning process and depth. This collaboration will be utilized throughout the lessons as part of the unit and teaching will take place in other classrooms as well. Three units span the nine-week period. This nine-week curriculum reflects the time an eighth grade student typically spends in an art classroom per year in a large number of schools (40 minutes per day for the duration of a report card quarter) as a part of a rotation system which allows for the inclusion of Art, Health Education, Physical Education and Keyboarding classes. The curriculum here will include elements from the units of study included in the curriculum described in the North Carolina Standard Course of Study. This curriculum plan however, will not include all units and concepts covered in each discipline as such a short time span and time limit (less than three and a half hours per week) is not able to realistically support such an expanse of information. The focus will be on highly involved projects that take a considerable amount of time due to their comprehensive nature, focusing on a big idea that will drive the lesson forward. All parts of the unit will be reflected in the following narration and a reflection of how these units integrate and benefit students will also be examined.

Live Reef Sculpture

Taking a closer look at the world we live in is always valuable and profitable. In this unit students will be studying marine ecosystems, and create their own sculpture which will become part of an artificial aquarium reef in the classroom. Students will be able to observe as it changes and grows.

To jump start this unit, students will be studying marine reef ecosystems, and they will discover that reefs are a reservoir of nutrients (NC Public Schools) that are teeming with life. In order to reference their knowledge base, a portion of the popular animated film *Finding Nemo* will be shown to the students. While they watch, students will be asked to identify different parts of the reef especially the plants and animals unique to the reef environment. Students will also be studying the problems facing reefs as they struggle for survival and sustainability. As they delve into studying the disappearance of reef life, students will research possible ideas to resolve the problem. One of these proposed solutions, artificial reefs, have been embraced by artists such as Jason de Caires Taylor who uses his sculpture to create artificial reefs (www.underwatersculpture.com) around the world. Taylor's website is full of his body of underwater work. The following description of Taylor's work is taken from the biography section of his website:

> "[His work is] constructed to be assimilated by the ocean and transformed from inert objects into living breathing coral reefs, portraying human intervention as both positive and life-encouraging (www.underwatersculpture.com)."

This will be the inspiration for a collaborative class project: creating an artificial saltwater reef for a class aquarium that the students can observe as it develops and changes.

The first step in creating their part of the artificial reef will be coming up with a design. Students will use Jason de Caires Taylor's work as a jumping off point. They will learn how Taylor creates his work and makes it function as part of the reef structural design. Once a design is sketched out on paper, students will begin the construction of a clay sculpture which will be used to mold and cast a concrete sculpture. As they construct their pieces students will consider how their sculptures will interact with each other in the aquarium, thereby creating a collaboration of ideas between them to create the end product. While their sculptures cure, students will participate in the set up of a saltwater aquarium for the classroom. When optimal conditions have been reached in the aquarium environment and the sculptures are ready to submerge, students will add their figures to the aquarium. Added to the aquarium environment will be microscopic organisms that will encourage coral and other reef attachments to grow. As the weeks go by, students will see the growth of their very own artificial "reef" and be able to track the changes to the environment through art.

This project allows students to be conscious of the impact they can have on the world around them both positively and negatively. The collaborative nature of the project will allow students to work together towards a common goal, merging their ideas together. The changing nature of the end product will also compel students to think beyond the short term in the creation of their sculptures. The form and appearance of

their sculptures will change with the growing and changing environment of the aquarium.

Graphic Storytelling

Storytelling is a valuable skill and art that has been passed down through history as a way of remembering and entertainment and is a part of every person's life beginning at a young age. In order to explore and cultivate their own storytelling students will be utilizing their research and narrative writing skills in creating their own graphic story. Using Maus by Art Spiegelman and other biographical graphic novels as inspiration students will choose a member of their family to interview about their past experiences which had an impact on their life. After conducting the interview students will write a graphic narrative story in the graphic novel/comic book format.

In the beginning stages of this project, students will be familiarizing themselves with the art of storytelling and illustration through the Pulitzer Prize winning graphic novel, Maus by Art Speigelman, who interviewed his father about his experiences in concentration camps during World War II. Should a student wish, they may also draw inspiration from other biographical graphic novels as well. As they read, students will take note of reoccurring themes, symbolism, writing and drawing style etc. After reading Speigelman's account students will be choosing a family member to interview for their own biographical narrative. While in the process of conducting their interview and creating their narrative, students will consider things like: what is important about telling someone's story, how much detail to include, narration and dialogue. To accompany their written story, students will be creating illustrations that will help tell their story.

Speigelman used symbolism in the creation of his characters making the Jews appear as mice and the Germans as cats, symbolizing the cat and mouse metaphor. As students create their characters they will need to think about any added symbolism that would lend extra potency to their character's story. Students will receive instruction and demonstration in cartooning and caricature to help them get started. An outline and storyboard will help students plan their illustrations and story. While illustrating their stories students will also consider how they can communicate details through imagery, irrelevant information to leave out, simplification etc. After illustration and dialogue is blocked in with pencil, students will be going over their work with pen and ink techniques adding color afterwards with either markers or watercolors if they wish (color can be optional). Once all the pages are complete, students will be binding their stories into a book, adding a cover and attaching everything together with staples.

This project offers students the opportunity to learn a little more about their own family history first hand, employing the oldest type of history recording: storytelling. We often overlook our own family history and stories while those with the experience are still available to recount the story. Piecing together a narrative from someone else's account can be a challenge. Sorting out what to include and what to leave out (necessary and unnecessary) is a valuable skill that will greatly benefit students. Narrative writing also offers great aid to students along with the ability to visually tell a story. Pictures and visual storytelling is a tool that has been used for as long as humans have been communicating. Images are a powerful and universal way to convey information and tell stories. The utilization of symbolism creates deeper meaning and understanding. As

students are creating a story from a family member's experience, a stronger connection is made as well.

Clay and the Cherokee

A central part of the North Carolina curriculum for the eighth grade year is the state (NC) and its history. The Cherokee tribe plays a central role in the state's early history as well as its continuing history. In this unit students will be looking at pottery and ceramics in a way in which they haven't been introduced before. In previous years students may have created clay pieces, but this year, with the study of the development of the state of North Carolina as the main focus in Social Studies, students will focus on traditional Cherokee pottery techniques and method in their artmaking. Students will enrich their knowledge and understanding of traditional Cherokee culture and by adding to their skill set and knowledge of the medium. To begin, students will explore and discover how clay is made, the different types and where it can be found naturally. In the preliminary stages of this unit, students will learn where clay comes from, how it is made, how Native American's used clay and what functions it served. Students will explore where clay is found in the area, how it is worked with and the resulting works of both pre-Revolutionary and Contemporary Cherokee artists.

After learning a bit of background students will discover answers to questions such as: How is clay made/ where does it come from? How did the Native Americans of North Carolina use clay? What function did clay serve? How have the traditional methods and techniques changed and how have they stayed the same or similar? In addition to these questions students will learn about the anatomy of a pot and clay

techniques. Students will be reminded of the construction of a pinch and coil pots which will help them in their construction. A demonstration of burnishing will be given as well. Students will then gather materials and begin constructing their pots. These pots will be able to be constructed quickly as students have already mastered the technique previously. A template will be used while constructing the coil pot so students may focus of the construction of a specific form.

After a simple coil pot has been completed students will be moving on to a more complicated form: a functioning clay flute. Students will construct their flute by first forming a cylinder around a dowel rod. Next, the mouthpiece is created using a popsicle stick and cutting tools. During this second step, students must employ an understanding of physics to construct a working mouthpiece, spitting the air to make it sound. Likewise, holes must be bored into the body of the flute to create tone holes for the various notes to be played. The final step before the clay is fired is burnishing. Students will use a spoon or smooth rock to achieve a smooth, hard finish. When the clay is hard and dry (at this stage clay is called greenware) the flutes will be fired in the kiln. In the kiln, through the addition and application of high heat (temperatures up in the 2000 degrees farenheight range) the clay undergoes a physical change and turns into ceramic. Another chemical change occurs with the firing of the pieces a second time after being glazed; the glaze coat turns to glass to protect the clay beneath.

This unit gives students a greater appreciation for the traditional methods used by a native society and employs a wide range of knowledge from different areas.

Final Thoughts

Together these units cover a wide variety of topics and address a range of problems to be solved. Detailed lesson plans for all of these units are included in the appendix and can be adapted for different grade levels, class times and approaches. Each of these units strives to embody an arts based integrated approach, allowing students a wider breadth of knowledge and experience while also taking into account the different learning styles and other accommodations while allowing them to create meaningful art pieces. These theme-based lessons can be adapted to other age groups as well.

CHAPTER 5

CONCLUSION

Throughout this thesis I have presented the case for an integrated arts-based curriculum. As this educational paradigm has the potential to create a multi-faceted learning environment for students in which they draw connections between disciplines, search for deeper meaning and engage the arts through inquiry and multi-discipline application, I have explored the existing subject fragmentation in schools and ways in which the integrated approach to education seeks to eliminate it.

Cross-connective reinforcement between subjects within integration helps to remedy the problem of fragmentation. Student data in regard to the integrated curriculum models presented in this paper points to a definite a positive correlation between arts integration and student performance on standardized tests and learning ability. Seeing the success that the model schools presented in this thesis have accomplished with this approach has inspired me to consider a greater use of integrated arts-based strategies in my own high school classroom.

As I have incorporated more integrated lessons into my own teaching, I decided for my thesis to create a three-unit curriculum plan that covers a broad range of subject matter while still maintaining a creative element. As art already contains within it so many connections to other disciplines, it is an ideal vehicle for this integrated approach. Each of the units I present strive to embody an arts based integrated approach, not because it replaces the artistic, aesthetic and expressive goals of a well-balanced art curriculum but because it provides students with a wider breadth of knowledge,

experience and connection. This approach takes into account diverse learning styles and other accommodations while allowing them to create meaningful art pieces.

The units in the curriculum plan are just the tip of the iceberg—possibilities and connections are endless.

APPENDIX A

CURRICULUM PLANNING OVERVIEW

Curriculum Theme: A Member of Society-Local and Global

Grade Level: Middle School-8th Grade

Duration: 9-weeks

Synopsis: This nine-week curriculum reflects the time an eighth grade student typically spends in an art classroom per year in a large number of schools (40 minutes per day for the duration of a report card quarter) as a part of a rotation system which allows for the inclusion of Art, Health Education, Physical Education and Keyboarding classes. The art curriculum here will loosely follow the order in which students will participate in units of study in the academic curriculum areas included in the North Carolina Standard Course of Study (Mathematics, Language Arts, Science and Social Studies) as well as inclusions from additional, non-required areas such as Music. This sequence however, will not include all units and concepts covered in each discipline as such a short time span and time limit (less than three and a half hours per week) is not able to realistically support such an expanse of information.

GRADE 8 ACADEMIC SUBJECT CONCEPTS AND UNITS OF STUDY

Science:

Using Technology to Study our World
Matter
Water
Earth
Chemical Impact
Cellular Sensation
Biotechnology
Microtechnology

Mathematics:

Real Numbers
Pythagorean Theorem and Indirect Measurement
Volume and Surface Area
Slope
Geometry
Scatterplots
Equations and Inequalities

Social Studies:

The state of North Carolina

English Language Arts:

Expressive Communication
Informational Communication
Argumentative Communication
Critique
Literature Study
Connections between literature and personal experience
Connections between features of different pieces of literature
Connecting themes and ideas
Connections between literature and historical and cultural significance
Grammar
Using the writing process in all environments

LESSON PLAN FORMAT:

LESSON NUMBER: TITLE

Materials:

Instructional Materials and Exemplars:

Description:

Objectives:

Vocabulary:

Discussion and Inquiry:

Demonstration:

Procedure:

(Day 1, 2, 3…)

APPENDIX B

LESSON 1: CLAY POTS AND WHISTLES

A LOOK AT TRADITIONAL CHEROKEE TECHNIQUES

Materials:

- Sketchbook
- Red Earthenware Clay
- Slip
- Clay tools (Needle tool, carving tools, modeling tools, wire cutting tool, ribs etc)
- Clay Mats
- Masonite Boards
- Cardstock for templates
- Tabletop Wheels
- Glaze
- Bamboo Brushes
- Smooth River Stones and Metal Spoons
- Dowel Rods
- Popsicle Sticks
- Plastic Bags

Instructional Materials and Exemplars:

  - Pinch pots and coil pots as examples
  - Clay in different stages (Wet, leather hard, greenware, bisque fired, glazed)
  - Non-processed clay dirt

- Native American Flute
- Social Studies Book for reference (current unit being studied)
- Ceramic arts (pots, sculpture etc.)
- Informational Powerpoint about Traditional Cherokee Ceramics

Description:

Students will be looking at pottery and ceramics in a way that they haven't been introduced to it before. In previous years students may have created clay pieces, but this year, with the study of the development of the state of North Carolina as the main focus in Social Studies, students will focus on traditional Cherokee pottery technique and method. Students will discover where clay is found naturally, and revisit basic clay techniques (pinch pots and coil pots) with more attention to detail and technique. In raising the difficulty level from previous years, students will be creating coil pots with a functioning lid. Students will finish their small pinch and coil pots by burnishing before being fired. One pot will be selected for glazing and finished glazed pots will be donated as a part of an Empty Bowls Project that will take place later in the year. The main endeavor that students will undertake is the creation of a functional clay flute.

Objectives:

1. Students will discover the traditional roots of pottery in the state of North Carolina.
2. Students will understand the changes clay and glaze undergoes in its different forms.
3. Students will focus on the form of the pieces they create.
4. Students will discover the properties of sound and tone.

5. Students will contribute to a cause.

Vocabulary:

- Clay
- Slip
- Score
- Join
- Burnishing
- Pinch Pot
- Coiling
- Anatomy of a Pot: Lip, Neck, Shoulder, Base
- Greenware
- Leather hard
- Bisque fire
- Reclaim

Discussion and Inquiry:

- How is clay made/ where does it come from?
- How did the Native Americans of North Carolina use clay?
    - What function did clay serve?
    - Traditional methods and techniques.
    - How have these traditional methods and techniques changed and how have they stayed the same or similar?
- Can the form of a pot stand on its own?

- Anatomy of a pot.
- How is a whistle or a flute able to make sound?

Demonstration:

1. Students will be given a refresher demonstration of pinch pots and coil pots.
    a. Students will be instructed how to construct a functioning lid for their coil pot.
2. Students will be given a demonstration of how to burnish their pots with a smooth river stone or a metal spoon.
3. Students will be shown how to construct a clay flute:
    a. Construction of the tube/ body.
    b. Construction of the mouthpiece.
    c. Creation of the tone holes.
    d. Checking the functionality/tonality.
    e. Glazing and Burnishing.

Procedure:

Phase 1:

The first day is an informational and note taking day, focusing on the history of traditional Cherokee pottery. Students will explore where clay is found in the area, how it is worked with and the resulting works of both pre-Revolutionary and Contemporary Cherokee artists..

Phase 2:

A review of clay will either be finished or conducted as well as a demonstration. Students will be reminded of the construction of a pinch and two coil pots as well as the

addition of a lid for one coil pot. A demonstration of burnishing will be given as well. Students will then gather materials and begin constructing their pots. These pots will be able to be constructed quickly as they are to be no more than 4 inches (pinch pot) and 6 inches (coil pot: base and neck no more than 4 inches in diameter) tall. A template will be used while constructing the coil pot so students may focus of the construction of a specific form.

Phase 3:

Students will be completing the construction of their 3 pots and finishing two of them by burnishing with a stone or spoon

Phase 4:

Today will be a demo and construction day for their flute. Some of this will be done simultaneously so as not to leave behind any student during the construction of the flute.

Steps:

1. Construction of the body—clay formed around dowel rod.
2. Construction of the mouthpiece—with aid from the popsicle stick and cutting tools.
3. Creation of the tone holes with a clay removal tool. (Test tone)
4. Burnishing

Phase 5:

All flutes will be left to dry. All finished (dry greenware) pots will be bisque fired and ready for glaze. Students will glaze one coil pot, keeping the other pots as unglazed as they were burnished.

Phase 6:

Bisque fired flutes will be ready for final testing and glazing.

APPENDIX C

LESSON 2: LIVE REEF SCULPTURE

ENVIRONMENTAL ART

Materials:

- Sketchbook
- Clay
- Sculpting tools
- Sealant
- Buckets/containers
- Silicon for mold making
- Drill
- Concrete mixture
- Salt water Aquarium set up
- Computer for Research (Room and Lab) and Library

Instructional Materials and Exemplars:

  - *Finding Nemo*
  - www.underwatersculpture.com (Jason de Caires Taylor)
  - Science Text book (Chapters/Units on Marine Life)

Description:

In this unit students will be studying marine ecosystems and create their own sculpture, which will become part of an artificial aquarium reef in the classroom that students will be able to observe as it changes and grows.

Objectives:

1. Students will utilize scientific technology and study.
2. Students will learn the molding and casting process.
3. Students will learn about environmental impact.
4. Students will collaborate to create a work of art.

Vocabulary:

- Environmental Impact
- Environmental Art
- Reef
- Sculpture
- Mold
- Cast
- Cure

Discussion and Inquiry:

1. Scientific inquiry through the exploration of reef/ marine life.
2. Why are the reefs disappearing?
3. What can we do to help?

Demonstration:

1. .Carving and sculpting.
2. A demonstration of molding and casting will be given

Procedure:

Phase1:

Students will study reef environment in class. They will watch part of *Finding Nemo* and identify different things in the reef as they watch. They will also be learning about the disappearance of reefs and artists like Jason de Caires Taylor who are trying to help alleviate the problem.

Phase 2:

Students will discuss what kind of theme or look they want their works to have. They will sketch their designs and build them in clay. The clay sculptures will be bisque fired and then be molded and cast. Sculptures and buckets will be sprayed with a releasing spray. Each student will have their own bucket. The silicon mixture will be poured into the bottom of the bucket and left sitting until it has a bit of resist. The sculpture will be put into the bucket and then filled the rest of the way with silicon and be left to cure. Once cured, the entire bucket will be emptied. Teacher will use a razor blade or knife to halve the cylinders to get the sculpture out. The clay sculpture will be removed and the silicon mold will be placed back into the bucket. A 1 inch hole will be drilled into the top of the mold so the concrete mixture can be poured into it. The concrete mixture will be mixed and poured into the empty molds in the buckets and left to set and cure. Once cured, the casts are ready to be removed.

Phase 3:

The aquarium will be assembled. Follow instructions for salt water aquarium assembly. Sculptures will be added to the aquarium as well as coral, plant life, fish and microorganisms that will encourage growth in the aquarium.

Phase 4:

Students will be able to observe the change in the aquarium as time in the classroom goes by. Students will also be helping with the responsibility of caring for the fish.

APPENDIX D

LESSON 3: GRAPHIC STORYTELLING

A SHORT STORY ZINE

Materials:

- Sketchbook
- Heavy drawing paper
- Cardstock
- Felt tipped pens
- India Ink
- Calligraphy pens and nibs
- Watercolors
- Paint Brushes
- Water cups
- Palette
- Colored Pencils
- Markers
- Bone Folder
- Ruler/Straight Edge
- Waxed Thread
- Needle
- Awl/Needle tool

Instructional Materials and Exemplars:

- Maus by Art Spiegelman and other Graphic Novels
- Comic strips and political cartoons
- Graphic organizers for planning

Description:

Students will be utilizing their research and narrative writing skills in creating their own graphic story. Using Maus by Art Spiegelman as inspiration, students will choose a member of their family to interview about their past experiences which had an impact on their life. After conducting the interview students will write a short graphic narrative story in the form of a zine.

Objectives:

1. Students will utilize their interviewing and narrative writing skills to develop a story with plot, characters, setting etc.
2. Students will develop their own illustration style.
3. Students will utilize graphic organizers while planning and organizing their narrative.

Vocabulary:

- Illustration
- Zine
- Book Block
- Spine
- Plot
- Symbolism

- Theme
- Tone

Discussion and Inquiry:

1. Parts of a story.
2. What would you consider to be a significant time or point in someone's life?
3. How important is it for someone to have their story told?
4. Can you/ should you try to include every detail?
5. What can you communicate with the illustration?

Demonstration:

1. Simplification/caricature/cartoon/symbolism, personification etc.
2. How to use pen and ink.
3. Book making/publishing

Procedure:

Phase 1: Planning

1. Choose and interview person
2. Create an outline and storyboard.
3. Character development

Phase 2:

1. Creating the story: illustration, writing and dialogue in pencil.
2. Finishing details/ finishing in pen and ink.
3. Any color that will be added.

Phase 3:

1. Publishing/ creating the book.

a. Book Construction

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